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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/515,674	02/29/2000	Sreenivas Gollapudi	242/199	9849

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EXAMINER

DONAGHUE, LARRY D

ART UNIT PAPER NUMBER

2154

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/515,674

Applicant(s)

GOLLAPUDI ET AL.

Examiner

Larry D. Donaghue

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-3, 9, 11-13, 19, 23 and 24 is/are rejected.  
7) ☒ Claim(s) 4-8, 10, 14-18, 20, 21, 25 and 26 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 02/28/2005.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

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1. Claims 1-26 are presented for examination.
2. Claims 4-8, 10, 14-18, 20, 21 and 25-26 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 3, 9, 11, 12, 13, 19, and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable Prolli et al. over in view of Moll (5,600,316).

Prolli et al. taught the invention (1,11, 23) substantially as claimed including identifying data requested by a client (abstract, col. 14-40); identifying prefetch data, said prefetch data comprising information not immediately requested by said client (col. 1, lines 14-40, abstract).

As to claim 22, Prolli et al. taught said prefetch data comprises information associated with a web page (col. 1, lines 14-25).

Prolli et al. did not expressly teach determining the redundancy of the prefetch data. Moll taught determining the existence of data redundancies in said prefetch data and suggests obtaining a reduced set of prefetch data based at least in part on the determined existence of data redundancies (figure 8a-c, see mask, col. 12, lines 33-56, abstract); and transmitting a reduced set of prefetch data from the server to the client, said reduced set comprising a smaller memory footprint than said prefetch data (col. 3, lines 14-32).

It would have been obvious to one of ordinary skill in the art to combine these references as Moll expressly discloses the desirability of conserving memory space and transmission time.

As to claims 2,12 and 24, Moll taught determining the existence of said data redundancies is performed by calculating row differences between successive rows in said prefetch data ((figure 8a-c, see mask, col. 12, lines 33-56).

As to claims 3 and 13, Moll taught calculating said row differences between successive rows in said prefetch data is performed by identifying identical column values for said successive rows (figure 8a-c, see mask, col. 12, lines 33-56).

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As to claims 9 and 19, Moll taught redundancies in said prefetch data is performed by identifying multiple copies of an item of information in said prefetch data; and the act of transmitting a reduced set of prefetch data comprises sending a single copy of said item that has not changed ,between a first row and a second row (figure 8a-c, see 1<sup>st</sup> line of transmitted data , col. 12, lines 33-56) .

5. Claims 1, 2, 3, 9, 11, 12, 13, 19, 22 and 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable Agarwi. (5822,749) over in view of Moll (5,600,316).

Agarwi taught the invention (1,11, 23)substantially as claimed including identifying data requested by a client (col. 3, lines 27-55); identifying prefetch data, said prefetch data comprising information not immediately requested by said client (col. lines 27-55).

As to claim 22, Agarwi taught prefetch data comprises , information in a database table (col. 47, lines 50-66).

Agarwi did not expressly teach determining the redundancy of the prefetch data. Moll taught determining the existence of data redundancies in said prefetch data and suggests obtaining a reduced set of prefetch data based at least in part on the determined existence of data redundancies (figure 8a-c, see mask , col. 12, lines 33-56, abstract); and transmitting a reduced set of prefetch data from the server to the client, said reduced set comprising a smaller memory footprint than said prefetch data (col. 3, lines 14-32).

It would have been obvious to one of ordinary skill in the art to combine these references as Moll expressly discloses the desirability of conserving memory space and transmission time.

As to claims 2, 12 and 24, Moll taught determining the existence of said data redundancies is performed by calculating row differences between successive rows in said prefetch data ((figure 8a-c, see mask , col. 12, lines 33-56).

As to claims 3 and 13, Moll taught calculating said row differences between successive rows in said prefetch data is performed by identifying identical column values for said successive rows (figure 8a-c, see mask , col. 12, lines 33-56).

As to claims 9 and 19, Moll taught redundancies in said prefetch data is performed by identifying multiple copies of an item of information in said prefetch data; and the act of transmitting a reduced set of prefetch data comprises sending a single copy of said item that has not changed ,between a first row and a second row (figure 8a-c, see 1<sup>st</sup> line of transmitted data , col. 12, lines 33-56) .

6. Applicant's arguments filed 02/28/2005 have been fully considered but they are not persuasive.

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Applicant argues "Claims 1, 2, 3, 9, 11, 12, 13, 19, and 22 stand rejected under 35U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,098,064 (Pirolli) in view of U.S. Patent No. 5,600,316 (Moll). Applicants agree with the Examiner that Pirolli does not disclose or suggest determining redundancy of prefetch data. However, Moll fails to make up the deficiency present in Pirolli. According to the Office Action, column 12, lines 33-56, the abstract, and figures 8a-c of Moll disclose determining redundancy of prefetch data. However, the cited passages actually disclose:

Repetitive data and non-repetitive data, including periods of no information, is encoded prior to transmission or storage in digital form to minimize the memory space required for storage or the time required to transmission. Repetition, partial repetition, and near repetition is encoded in a form indicating the occurrence of repetition, its characteristics and its duration. The existence and size of repeated patterns in the data is dynamically determined. When repetition is detected, non-repetitive data is inserted into the data stream and repeated data is removed from the data stream. To this non-repeated data in the data stream are added a coded repeated pattern sample, an identification preamble signal, an instruction signal for decoding purposes, a period count signal, a mask signal, and a repeat count signal. All necessary data elements are combined and assembled to produce compressed data. A receiver utilizes these coded and uncoded data elements to regenerate complete original data.

The basis for data compression is to remove the repeated bits because they need not be stored, but rather regenerated at a later time.

FIG. 8a shows five 4-bit characters where the first bit of each character is a one, and the third bit of each character is a zero. This example of the invention removes the 1st and 3rd bits of each character and sends the remaining bits, in this case as 2 bit characters. To designate which bits to remove (and later regenerate), the control data contains a mask which has the 1st and 3rd bits set to one (remove) and the remaining bits reset to zeros (retain). The first 4 bit character of the data involved in repetition is transmitted as the pattern, such as pattern 457 in FIG. 4. The pattern shows the state (1's or 0's) of the repeated bits for later use when regenerating the data.

FIG. 8b shows a similar case using a CVSD coded audio frequency as an example. FIG. 8c shows a similar case using ASCII coded data. FIG. 8d shows the technique of removing the repeated bits before storage or transmission using the data of FIG. 8a. The mask bits are in an end around mask shift register 890 moving at the same clock rate as the shifting in data register 114. The mask register bits cause the data register bits to be either thrown away via AND gate 887 or to be stored or transmitted via AND gate 889.

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As such, the cited passages disclose compressing data by removing repeated data, and does not disclose or suggest determining redundancy of prefetch data, as recited in claims 1, 11, and 23. In addition, Applicants respectfully note that neither Pirolli, Moll, nor their combination, discloses or suggests obtaining a reduced set of prefetch data based at least in part on the determined existence of data redundancies, and transmitting a reduced set of prefetch data from a server to a client, as recited in claims 1, 11, and 23. For at least the foregoing reasons, claims 1, 11, and 23, and their respective dependent claims, are believed allowable over Pirolli, Moll, and their combination.

#### RESPONSE

The cited passage cites forth "When repetition is detected"(determining redundancy) and "Repetitive data and non-repetitive data, including periods of no information, is encoded prior to transmission or storage in digital form to minimize the memory space required for storage or the time required to transmission. " (suggests obtaining a reduced set of prefetch data based at least in part on the determined existence of data redundancies, and transmitting a reduced set of prefetch data from a server to a client).

Further applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant fails to address the combination of the references .

Applicant argues Claims 1, 2, 3, 9, 11-13, 19, and 22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,822,749 (Agarwal) in view of Moll. Applicants agree with the Examiner that Agarwal does not disclose or suggest determining redundancy of prefetch data. However, as similarly discussed previously, Moll fails to make up the deficiency present in Agarwal. For at least the foregoing reason, claims 1, 11, and 23, and their respective dependent claims, are believed allowable over Agarwal, Moll, and their combination.

#### RESPONSE

See response to previous arguments

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

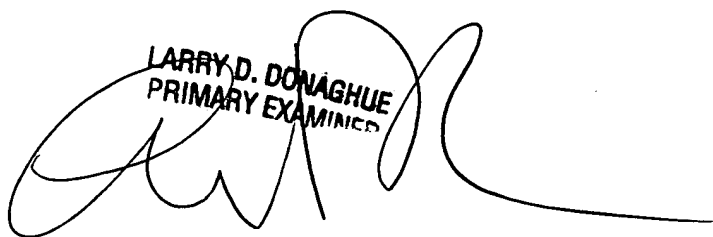
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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Larry D. Donaghue whose telephone number is 571-272-3962. The examiner can normally be reached on M-F 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
LARRY D. DONAGHUE  
PRIMARY EXAMINER